

Products Issued by the NWS in San Diego

The NWS prepares a large number of various products that provide specific information. Each product name is identified by its code containing eight or nine letters. The code formula is explained above under “Communications and Product Dissemination.” For a listing of NWS products, see Appendix A. The products are organized and described in the following categories.

Note: All products originating from San Diego begin with the LAX identifier. For simplicity, the products below will be identified only by the following five or six letter code.

Climate - click on “Climate - Southwest CA” on our homepage for more information.

The **Daily Temperature and Precipitation Summary** (RTPSGX) reports the daily maximum and minimum temperatures and precipitation for numerous cities in our forecast area from a variety of weather stations, such as airports, cooperative observers, and remote weather systems. The RTP is issued at 430 am/pm and again at 530 pm largely to provide the data to local news media for early morning and late afternoon broadcasts. Updates may occur during the evening if additional data arrives. Note that these temperatures are the 24 hour high and low, which may not necessarily agree with the calendar day because thermometers are reset at the time of the 4 pm observation. This can lead to a problem. For example, let’s say the high in San Bernardino was 80 degrees one day. The 4 pm report gave the high of 80 and the current temperature of 77. The next day is much cooler; Riverside and Ontario report a high of 65 degrees. The report from San Bernardino is a high of 77. Clearly, this is what we call a “carry over”. The high of 77 occurred at the time the thermometer was reset around 4 pm the previous day. Stations that report once daily are susceptible to carry overs when the following day is much cooler. Other problems are more rare, but also possible. An observer may not have reported for multiple days for a variety of reasons and the thermometer would not have been reset. Also, the high temperature may actually occur after the 4 pm observation. Please take special note of the disclaimer on the product and understand that some highs that appear abnormally high may be carried over from the previous day. The **Climate Report** (CLIXxx) shows the updated climate values for the day for a number of cities in our area, with more currently being added. Daily climate reports are prepared for many sites with automated weather equipment such as: Fullerton, Santa Ana (John Wayne Airport), Ontario, Riverside, Palm Springs, Thermal, San Diego, Ramona and Campo. In the product’s name, xxx represents FUL, SNA, ONT, RAL, PSP, TRM, SAN, RNM, and CZZ, respectively. Each CLI product is a daily almanac of temperature, precipitation, and several other weather conditions displayed with daily normal values, updated totals and records. These products are updated twice daily early in the morning and in the afternoon. The **Local Climatological Data (F6)** chart is a look at the current month of daily records. This is not an issued product, but is available on our web site. These are prepared for all cities for which there is a climate report (CLIXxx). At this time, only SAN - Lindbergh Field has an archive for past records, but archives will be built for the other sites. The **Monthly Weather Summary** (CLMSAN) is updated on the 1st day of each month, detailing the previous month’s statistics for San Diego only. This form provides updated daily statistics for each month for San Diego. The **Record Report** (RERSAN) is a report of daily record temperatures or precipitation amounts met or exceeded at many cities in the area. Only some of the cities that report daily on the RTPSGX keep a history of daily records. Many of these cities have a short history dating back only to

the 1970s. This makes the records easier to reach, and therefore less than remarkable. San Diego, Santa Ana, and Riverside are three stations with a much longer climate record.

Current Observations - click on “Current Conditions - Observations” on our homepage for more information.

The **State Weather Roundup** (SWRCA) is a collective of current airport observations all over Southern California including sky condition, temperature, dew point, relative humidity, wind speed and direction, barometric pressure and trends. When applicable, the remarks column shows very low visibilities, heat index or wind chill index values. The **Mexican Weather Roundup** (SWRMX) is a locally generated collective of weather observations from Mexico. These two roundups are updated every hour and the lists get shorter overnight as several observations do not continue. The **Coastal Weather Observations** (CGRSGX) product lists the current weather and sea conditions at several coastal stations, and is updated every three hours, but not consistently overnight.

Public Forecasts

The **Zone Forecast Product** (ZFPSGX) is the most well known and used product we prepare. It is issued at 330 am and 230 pm every day and as necessary (when the forecast does not match current or expected conditions). The **Hazardous Weather Outlook** (HWOSGX) is a product issued each morning at 6 am highlighting any expected weather in the following week that may need the issuance of an advisory or a warning. The **Short Term Forecast** (NOWSGX), also called the “nowcast”, is a brief detailed forecast usually covering two hours, but no more than six hours. These forecasts appear only when significant weather is occurring such as a precipitation event. They are updated frequently as needed to provide detail not possible in the zone forecast product. The **Area Forecast Discussion** (AFDSAN) is not a forecast itself, but a discussion of the reasoning and thinking behind the forecast. A simple explanation of the general weather patterns is given in the synopsis. In the discussion portion, complex meteorological terms are often used and it is not generally public-friendly, but it contains a wealth of information about the current and future weather developments and the particular challenges involved in the current forecast. It is routinely updated three times daily, at 330 am, 230 pm, 930 pm, and other times when needed. The **Tabular State Forecast for California** (SFTSGX) is a forecast of specific temperatures and chances of precipitation for selected cities across Southern California. It is updated twice daily at 330 am and 230 pm.

The public forecast program also includes a couple of routine hydrology forecasts. The **Quantitative Precipitation Statement** (QPSSGX) is a routine forecast of rainfall amounts during the wet season, November through April. The product shows in table format expected rainfall amounts in 6-hour intervals for the first 24 hours, and 12-hour increments for the following 24 hours for numerous locations in the forecast area. The **Hydrologic Outlook** (ESFSGX) is a routine forecast during the summer thunderstorm season in the mountains and deserts, June through September. The outlook presents a flash flood potential rating in each mountain and desert zone as none, low, moderate or high. Both of these products are issued twice daily by 4 am/pm.

Non-routine Products

A **Watch** is issued well in advance when conditions are favorable for a weather event to occur that can threaten life and/or property in the watch area.

A **Warning** is issued when a weather event that can threaten life and/or property is imminent or already occurring in the warned area. Emergency Alert Systems (**EAS**) are activated for short-fused warnings, such as a Severe Thunderstorm Warning.

An **Advisory** is issued when serious conditions exist that cause significant inconvenience. It may lead to a watch or warning.

Warning and Advisory criteria are found in Appendix D.

Verification

Observed weather conditions are essential to help the NWS determine which non-routine products to issue. When warnings are issued, information is collected about weather conditions that verify the warning. With the verification data, studies can be made to learn how well the forecast team warns correctly or creates a false alarm. In this way the NWS takes responsibility for its warnings. Verification is an important part of the ongoing improvement of the warning process.

Hydrology - Floods and Flash Floods

A **Flood Watch** (FFASGX) and subsequently a **Flood Warning** (FLWSGX) are issued when a mainstem river is expected to overflow its banks. A **Flood Statement** (FLSSGX) updates a warning. The NWS defines a flood as a normally dry area inundated with water along an established watercourse such as a mainstem river. In San Diego's forecast area, the San Diego River and the San Luis Rey River qualify as such watercourses. Fashion Valley and Oceanside are the points along these rivers, respectively, for which a flood watch or warning can be issued. The **River Statement** (RVSSGX) provides specific forecast levels at Fashion Valley and Oceanside during flooding events.

Flash floods are defined as a rapid rise in water flooding a local area, followed by a rapid drop in water level. Any small stream, creek, arroyo, wash or paved urban areas can be briefly inundated by a flash flood. Dam breaks or breaches cause flash flooding downstream. When any of these are expected a **Flash Flood Watch** (FFASGX) and subsequently a **Flash Flood Warning** (FFWSGX) are issued. An **Urban and Small Stream Flood Advisory** (FLSSGX) informs of inundation conditions not threatening life and property, but can be dangerous if not taken seriously. The **Flood Statement** (FLSSGX) is an update to all of the flood and flash flood warnings and advisories mentioned above, and can contain several flood and flash flood products summarized in one product.

When large surf and/or high tides are expected to cause flooding of ocean waters causing significant beach erosion and/or property damage, a **Coastal Flood Watch** and subsequently a **Coastal Flood**

Warning (both CFWSGX) are issued.

Winter Weather

All of the following winter weather watches, warnings and advisories come under the product header WWSGX. The **Winter Storm Watch** and **Winter Storm Warning** are issued when a significant winter storm will impact the region. These detail the adverse impacts caused by heavy snowfall combined with strong winds. When the snowfall and winds are not expected to reach warning criteria, a **Winter Weather Advisory** is issued to communicate the lesser impact. If heavy snowfall is expected without strong winds, a **Heavy Snow Warning** is issued. If the snow will be heavy, but not reach warning criteria, a **Snow Advisory** is issued. When snowfall and strong winds combine to create white-out conditions and near zero visibilities, a **Blizzard Warning** is issued. When these conditions are not as severe, a **Blowing Snow Advisory** is issued. Although unheard of in Southern California, ice storms or freezing rain events would be covered by an **Ice Storm Warning** and a **Freezing Rain (or Drizzle) Advisory**, respectively. Several different winter weather hazards can be in effect at once under one WWSGX product.

Severe Weather

Severe weather is associated with thunderstorms, which can bring any combination of deadly lightning, hail, heavy rain (with associated flooding), and strong damaging winds. When conditions are favorable for severe thunderstorms or tornadoes, the Storm Prediction Center issues a **Severe Local Statement** (SLSCA), which becomes a **Severe Weather Watch** for Southern California in a redefining statement issued by the Oxnard office. A **Severe Thunderstorm Warning** (SVRSGX) is issued when severe thunderstorm warning criteria are met or are imminent. It is not mandatory that a local statement or a watch be in effect before a warning is issued. In fact, it is rare. When a tornado is detected by weather spotters or Doppler Weather Radar, or the forecaster strongly believes a tornado is about to develop, a **Tornado Warning** (TORSGX) is issued. Updates are made to either or both of these warnings with a **Severe Weather Statement** (SVSSGX). Flash floods occurring with severe thunderstorms are detailed in their own **Flash Flood Warning** (FFWSGX). Severe weather over coastal waters is covered by a **Special Marine Warning** (SMWSGX), which warns of waterspouts and other hazardous boating weather. Severe weather is often very localized in time and space. Accordingly, these products are very short-fused and specific.

Weather without Precipitation

A Non-Precipitation Weather product (NPWSGX) covers a great variety of weather events that do not include precipitation. This product can be an advisory, a watch or a warning. A **High Wind Watch** and subsequently a **High Wind Warning** are issued when strong winds causing potential damage are expected. A **Wind Advisory** is issued when strong winds are expected, but fall below warning criteria. A **Wind Chill Warning** and a **Wind Chill Advisory** are issued when strong winds combine with very low temperatures. When dense fog develops in more than just a localized sense, a **Dense Fog Advisory** is issued. Extremes in temperature are also covered by the product. High temperatures and

humidity may warrant an **Excessive Heat Warning** when the Heat Index becomes dangerous. A **Freeze Warning** is issued when freezing temperatures present a serious threat to crops. A **Frost Advisory** is issued when a freeze is less serious.

Marine Forecasts and Warnings

The **Coastal Waters Forecast** (CWFSGX) is a forecast of winds and sea state on the coastal waters out to five days. It is issued four times daily at 230/330 am/pm and 830/930 am/pm PST/PDT. The forecast covers the coastal waters from the San Diego County shore out to five miles beyond San Clemente Island. The area is divided into two zones by a line 30 nautical miles off the coast and paralleling the coast. The outer and inner zones may be combined when expected conditions are similar. Within the body of the forecast a **Small Craft Advisory** may be issued when winds begin to present a hazard for small vessels. The following rare warnings, **Gale**, **Storm**, **Tropical Storm**, or **Hurricane**, may be headlined when very strong winds and/or stormy seas are expected. The **Surf Forecast** is issued twice daily at 2 am/pm and contains surf and rip current information for the beaches of Orange and San Diego Counties. A **Marine Weather Statement** (MWSSGX) is a multi-purpose product. It is a **High Surf Advisory** when large and dangerous surf is widespread along the coast. The Marine Weather Statement may also describe other potentially dangerous boating or beach conditions such as non-severe thunderstorms, strong rip currents, or minor tidal overflow. When the weather over the water becomes severe, a **Special Marine Warning** (SMWSGX) is issued. Coastal flooding caused by very high tides and/or large surf is covered by a **Coastal Flood Watch** and subsequently a **Coastal Flood Warning** (CFWSGX). If a seaquake occurs along the Pacific Rim, a **Tsunami Warning** (TSUWCA) may be issued by the Tsunami Warning Center in Alaska if favorable conditions for a tsunami are met. If Southern California impacts are expected, this warning is reissued with more local details by the San Diego Forecast Office.

Aviation Products

Aviation products are coded and disseminated to the aviation community and not through the standard media to the public, but are available on our web site. A **Terminal Aerodrome Forecast** (TAF) provides detailed changes in wind speed and direction, visibility, cloud coverage, cloud ceiling height and precipitation for local airports out to 24 hours. These airports include San Diego-Lindbergh Field (TAFSAN), McClellan-Palomar in Carlsbad (TAFCRQ), Orange County-John Wayne in Santa Ana (TAFSNA), Ontario (TAFONT), Palm Springs (TAFPSP), and Thermal (TAFTRM). A **Transcribed Weather Broadcast Text** (TWB432) is the 12-hour air-route corridor forecast encompassing the route between SNA and SAN, including the mountains of San Diego County. This describes weather conditions to be expected along the route. All forecasts are updated every six hours and updated as necessary.

Fire Weather

A **Fire Weather Forecast** is similar to the public zone forecast, but gives more detail regarding

relative humidity, winds and lightning potential. A **Fire Weather Watch** and subsequently a **Red Flag Warning** are issued when dangerous wildfire potential exists, i.e., when strong winds combine with low relative humidity. Spot weather forecasts, which are site specific for wildfires or controlled burns, are issued upon request from fire fighting agencies. The San Diego Forecast Office recently assumed these responsibilities in January 2003.

News Products

A **Special Weather Statement** (SPSSGX) is a description of an upcoming significant weather event, such as a winter storm. It is usually allowed to expire once the weather event is occurring and is covered by a warning or advisory, such as a Winter Storm Warning. The Rainfall Storm Total Summary (RRMSGX) is a periodic update to storm precipitation totals during a given storm. The **Local Storm Report** (LSRSGX) is issued soon after an intense weather event has produced injury, death or damage, documenting the place, time, and impacts of the event. Several reports may be issued after the same event as more information becomes available. A **Public Information Statement** (PNSSGX) is a multi-purpose news product. Its information can range from a summary of a weather event, an update to new technology, a change in the format of a product, a change in local policy, or other purposes.

Product Cross Reference

The following chart is a cross references for weather products issued by the NWS with the World Meteorological Organization (WMO) headers. The NWS identifier used is the final five or six letters of the complete eight or nine digit identifier.

Product	NWS Header	WMO Header	Issuance Times
Area Forecast Discussion	AFDSAN	FXUS66	330 am, 230 pm, 930 pm, and as needed
Climatological Report (Monthly)	CLMSAN	CSUX46	1 st day of the month
Climatological Report (Daily)	CLI (SAN, SNA, FUL, RAL, PSP)	CDUS46	2 am, 4 pm
Coastal Flood Warning	CFWSGX	FZUS68	as needed
Coastal Waters Forecast	CWFSGX	FZUS56	330 am/pm, 930 am/pm PDT (230 am/pm, 830 am/pm PST)

Coastal Weather Observations	CGRSGX	SXUS8	7 am, 10 am, 1 pm, 4 pm, 7 pm, 10 pm, (possibly 1 am, 4 am)
Earthquake Report	EQREQI	SEUS61	as needed
Fire Weather Forecast	FWFSGX	FNUS56	230 pm, 330 am
Flash Flood Warning	FFWSGX	WGUS56	as needed
Flood Watch	FFASGX	WGUS46	as needed
Flash Flood Potential Index	ESFSGX	FGUS76	4 am/pm (1 Jun-30 Sep)
Flood Statement	FLSSGX	WGUS46	as needed
Flood Warning	FLWSGX	WGUS46	as needed
Hazardous Weather Outlook	HWOSGX	FLUS46	6 am
Marine Weather Statement	MWSSGX	FZUS76	as needed
Mexican Weather Roundup	SWRMX	AXUS46	hourly
Non Precipitation Warnings/ Watches/ Advisories	NPWSGX	WWUS45	as needed
Offshore Waters Forecast	OFFPZ6	FZPN26	330 am/pm, 930 am/pm
Public Information Statement	PNSSGX	ABUS34	as needed
Quantitative Precipitation Forecast	QPSSGX	FSUS46	4 am/pm (1 Nov - 15 Apr)
Record Event Report	RERSAN	SXUS99	as needed
Red Flag Warning	RFWSGX	FXUS70	as needed
Regional Max/Min Temp and Precip Table	RTPSGX	ASUS66	530 am, 430 pm, 530 pm, and as needed
River Statement	RVSSGX	RWUS15	as needed
Severe Local Storm Watch and Areal Outlook	SLSCA	WWUS32	as needed
Severe Thunderstorm Warning	SVRSGX	WUUS56	as needed
Severe Weather Statement	SVSSGX	WWUS34	as needed
Short Term Forecast	NOWSGX	FPUS76	as needed

Special Marine Warning	SMWSGX	WMUS1	as needed
Special Weather Statement	SPSSGX	WWUS35	as needed
State Weather Roundup	SWRCA	ASUS46	hourly
Storm Report	LSRSGX	WWUS30	as needed
Surf Forecast	SRFSGX	FZUS56	2 am/pm
Tabular State Forecast for California	SFTSGX	FOUS45	330 am, 230 pm
Tornado Warning	TORSGX	WFUS56	as needed
Tsunami Warning	TSUWCA	WEPA41	as needed
Winter Weather Warnings/ Watches/Advisories	WSWSGX	WWUS46	as needed
Zone Forecast	ZFPSGX	FPUS56	330 am, 230 pm, and as needed